

MENULIS ITU ASYIK.....

**SEMINAR TEMPO INSTITUTE
GEDUNG TEMPO, JAKARTA, 12 MARET 2016**



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MENGAPA PERLU MENULIS ILMIAH POPULER

LEBIH DARI 1,5 JUTA ARTIKEL ILMIAH DITERBITKAN
DI JURNAL AKADEMIK TIAP TAHUN. NAMUN,
SEBAGIAN BESAR TERABAIKAN BEGITU SAJA, 82%
ARTIKEL DI JURNAL ILMIAH BELUM PERNAH
DIKUTIP (CITED) SEKALI PUN.

SATU ARTIKEL DALAM JURNAL ILMIAH BOLEH JADI
DIBACA KURANG DARI 10 ORANG.

<https://theconversation.com/academics-can-change-the-world-if-they-stop-talking-only-to-their-peers-55713>

KISAH SPUTNIK

**YANG MENGUBAH WAJAH
DUNIA**

Russians Win Race To Launch Earth Satellite

Man On Threshold Of Space Travel

By DANIEL F. GILMORE

United Press Staff Correspondent

LONDON (UP)—The pulsating radio "beep" of the first manmade earth satellite signalled today to the world that man had crossed the threshold into the age of travel through space.

The Soviet Union announced it had won the race into space by launching an earth satellite Friday, a 184-pound, 22-inch globe now orbiting the earth at 18,000 miles an hour, 560 miles up.

Millions of persons throughout the world heard the "beep...beep...beep..." rebroadcast today by local stations and realized that man had taken his first faltering steps into the new era.

Launching of the satellite was a tremendous victory for science. It was a more tremendous victory for Soviet propaganda to be able to trumpet to the world the Russians were the first to break through the frontiers of space.

Bolsters ICBM Claims

Bolstered Russian claims to

— WEATHER —

WEST VIRGINIA—Partly cloudy with highest in the 60s today and Sunday. Lowest tonight 50 west and 40 east portions.

VIRGINIA—Fair with lowest 45 to 50 west and north and 50 to 55 southeast portions tonight, Sunday mostly sunny and a little warmer. Tides on the coast and lower bay will run a foot or two above normal.

How To Spot Satellite

By UNITED PRESS

Here's how to look for the Russian earth satellite which will be whizzing through the sky at 18,000 miles an hour.

The best time to spot it is at dawn or dusk when the sky is semi-dark. There is a chance that it could be seen if it travels across the face of the moon at night.

The best instruments to use are ordinary binoculars or telescopes. Powerful telescopes won't pick it up because of their narrow fields.

Through optical instruments, the satellite will look like the faintest star which can be seen with the naked eye.

Keep a sharp eye out. The satellite travels so fast it may appear on the horizon for only seconds and chances of spotting it have been estimated at one in a hundred.

Epic-Making

U. S. May Speed Up Satellite Program

By JOSEPH L. MYLER

United Press Staff Correspondent

WASHINGTON (UP)—American scientists, caught flatfooted by Russia's epic launching of the man-made moon, indicated the United States may speed its own earth satellite program. Leaders of the U.S. satellite program also said that it as Russia rocketed its heavy pound satellite into a globe-doling orbit with a rocket "to" an intercontinental ballistic missile.

That could mean Russia only has beaten this country, frontiers of space, but also it has been called the "ultra weapon" for modern day war. This country has not tested a successful ICBM.

American diplomats concede Russia had scored a notable propaganda victory. The milita

**PELUNCURAN SPUTNIK
MEMBUAT AMERIKA
KEBAKARAN JENGGOT!**



UNI SOVYET PROPAGANDA POSTER, 1960

**WE ARE BORN TO MAKE A
FAIRY TALE COME TRUE!**

“Thank you, Mr. Sputnik. You will never know how big a noise you made. You gave us a shock which hit many people as hard as Pearl Harbor. You hit our pride a frightful blow. You suddenly made us realize that we are not the best in everything.”

Gabriel Heatter, an influential news commentator for the Mutual Broadcasting System, January 1958

WAJAH AMERIKA SETELAH SPUTNIK

- ▶ Overhaul sistem pendidikan, terutama cara pengajaran sains
- ▶ Buku-buku ilmu pengetahuan, Darwin, Newton, Einstein, yang tadinya cuma di lemari dibaca lagi dengan serius
- ▶ Penulisan sains populer didorong. Tidak hanya teks tetapi juga dalam bentuk komik, poster, animasi
- ▶ Murid, masyarakat luas, diajak mencintai sains dan inovasi

SUBURNYA TULISAN ILMIAH POPULER MEMANG BENAR TERBUKTI MENDORONG ILTEK & INOVASI DI AMERIKA

**—> TEKNOLOGI KEVLAR, TEKNIK PENGOLAHAN
MAKANAN, KOMPUTER, INTERNET, DLL**



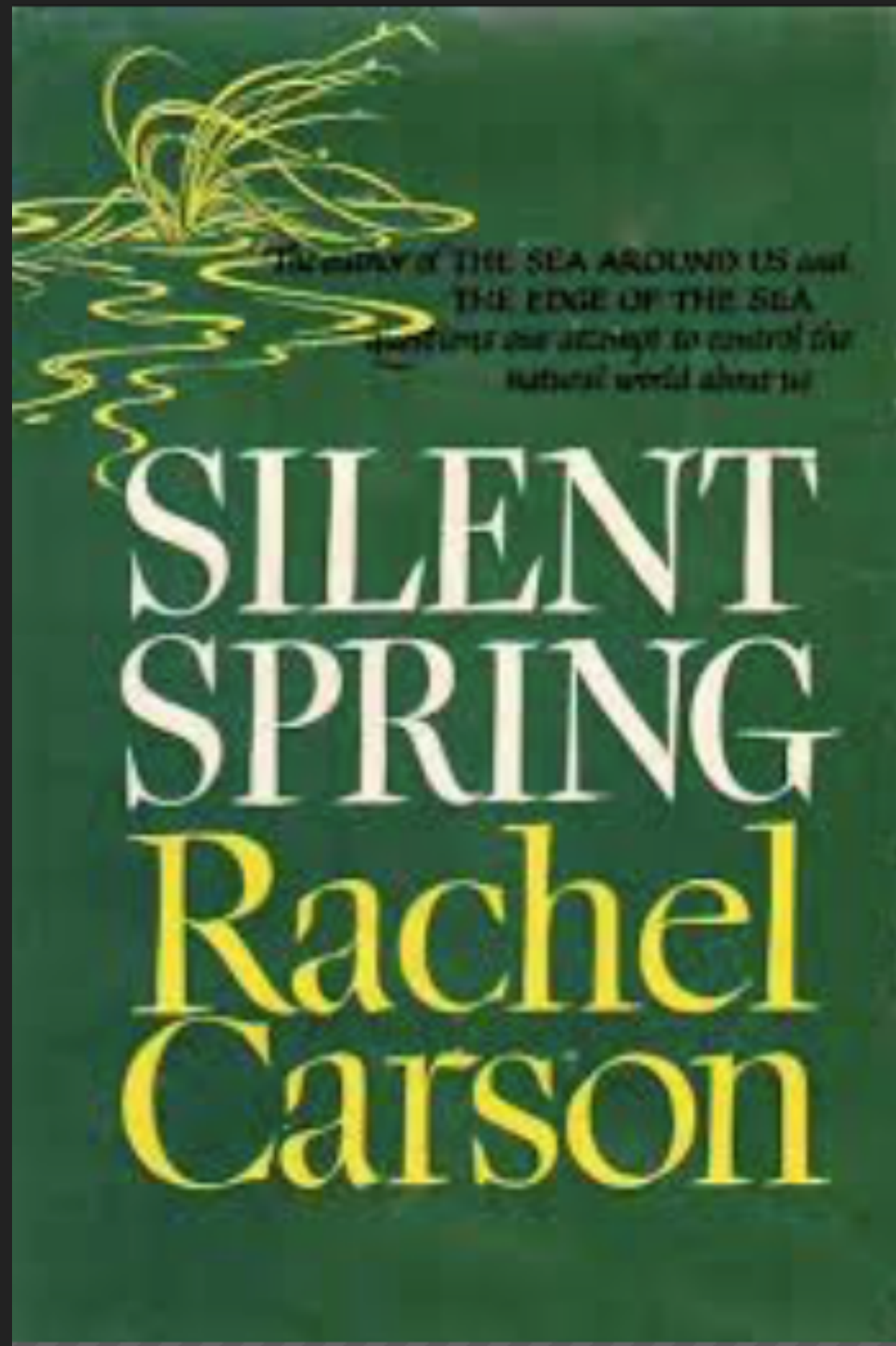
BUKU ILMIAH POPULER YANG MENGUBAH PERADABAN

**TIDAK SEMATA SOAL
TEKNIS, TAPI PUNYA
KEKUATAN STORYTELLING**

RACHEL CARSON, 1962

**BUKU SAINS POPULER
YANG MENGGUNCANG
DUNIA**

**PEGANGAN PARA
ENVIRONMENTALIST
SAMPAI KINI**

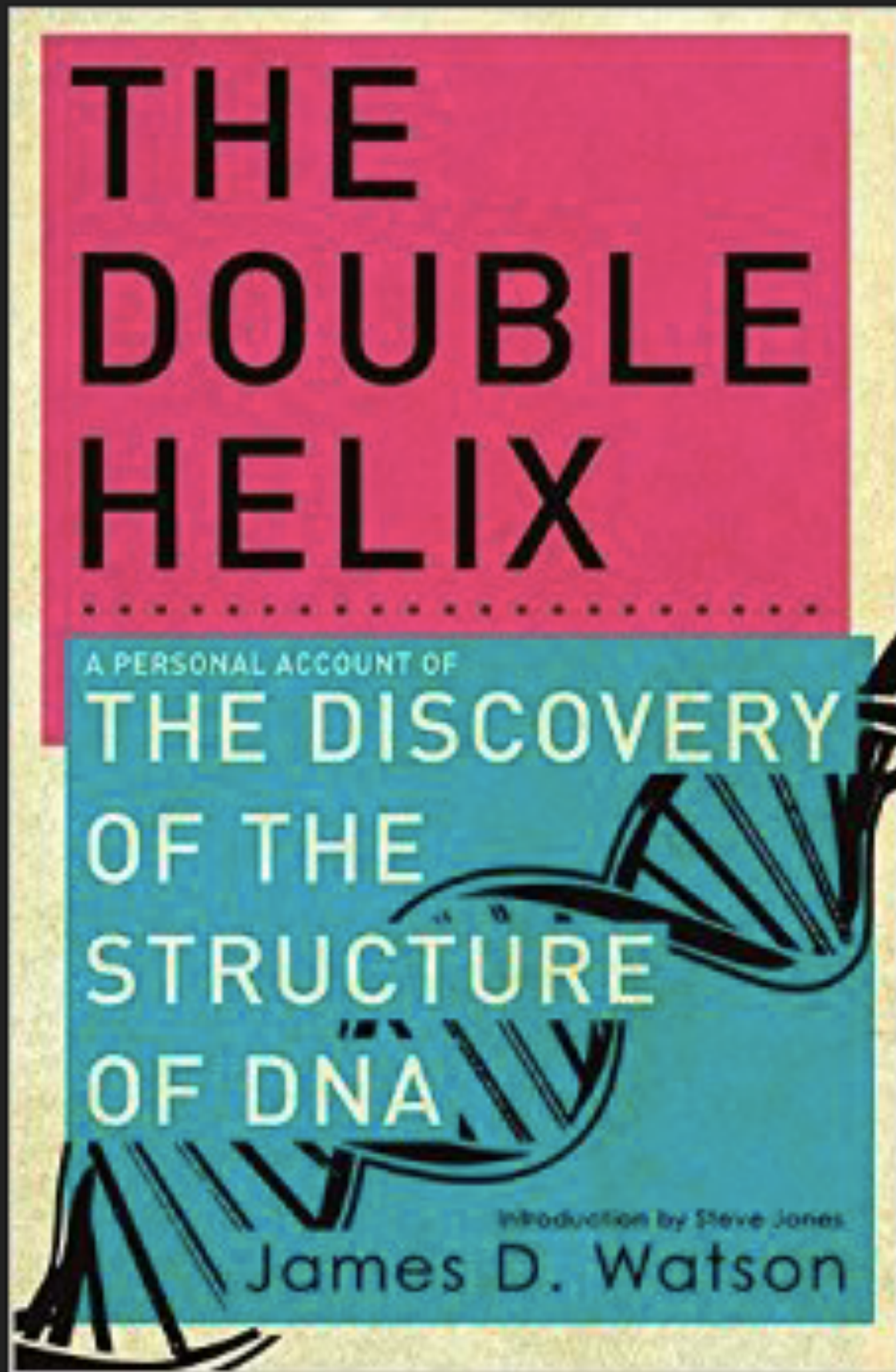


SILENT SPRING, RACHEL CARSON, 1962

There was a strange stillness. The birds, for example—where had they gone? Many people spoke of them, puzzled and disturbed. The feeding stations in the backyards were deserted. The few birds seen anywhere were moribund; they trembled violently and could not fly. It was a spring without voices. On the mornings that had once throbbed with the dawn chorus of robins, catbirds, doves, jays, wrens, and scores of other bird voices there was now no sound; only silence lay over the fields and woods and marsh.

Sebuah kesunyian yang aneh. Burung-burung, contohnya –ke mana mereka pergi? Orang-orang membahasnya, bingung dan tercengang. Tempat makanan, yang biasanya diserbu burung-burung, terabaikan.

**JAMES D. WATSON,
1968**



**PENEMUAN DNA,
RAHASIA KEHIDUPAN,
YANG MENGUBAH DUNIA
KEDOKTERAN &
FORENSIK**

THE DOUBLE HELIX, JAMES WATSON, 1968

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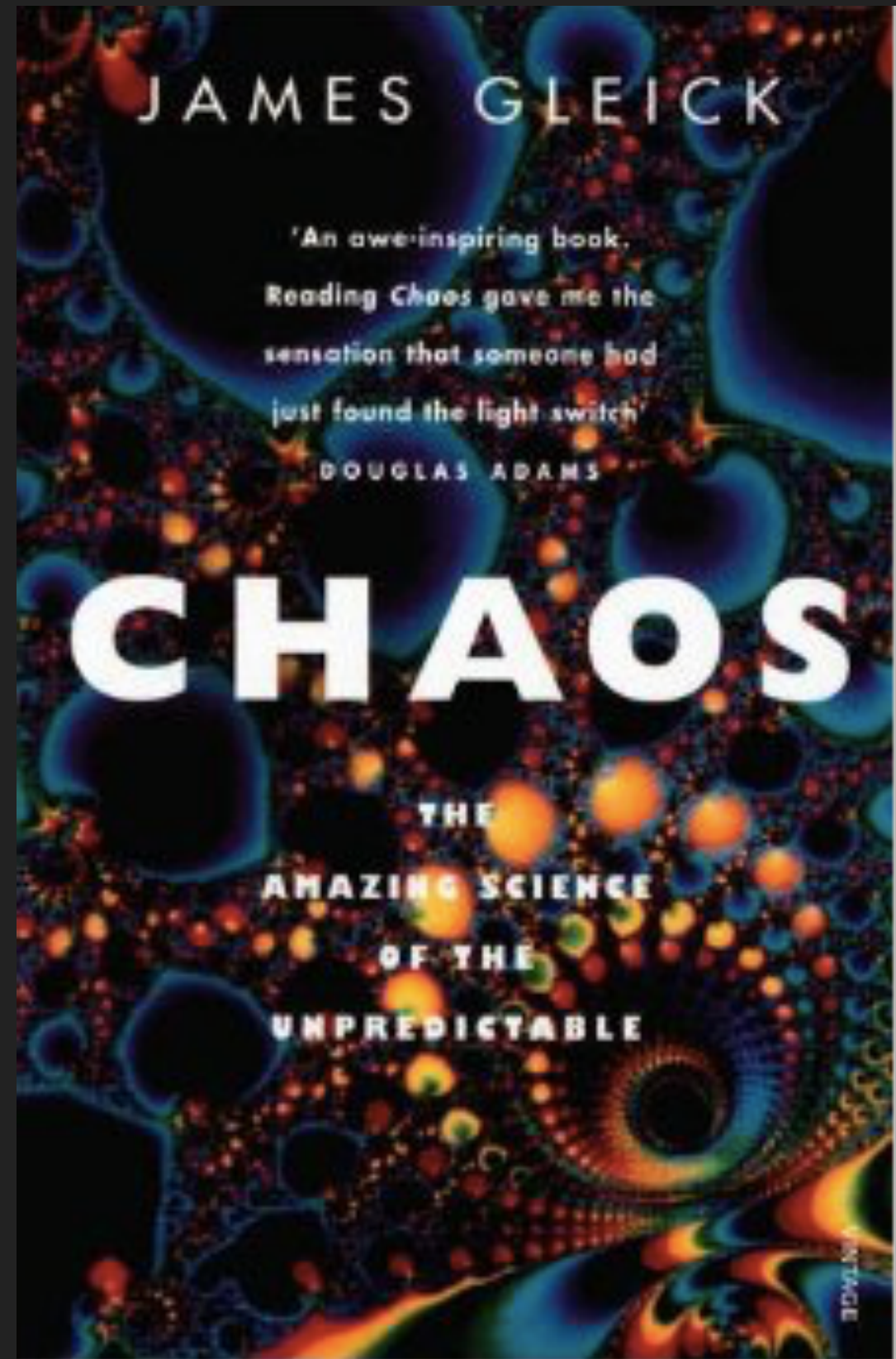
I PROCEEDED to forget Maurice, but not this DNA photograph. A potential key to the secret of life was impossible to push out of my mind. The fact that I was unable to interpret it did not bother me. It was certainly better to imagine myself becoming famous than maturing into a stifled academic who had never risked a thought. I was also encouraged by the very exciting rumor that Linus Pauling had partly solved the structure of proteins. The news hit me in Geneva, where I had stopped for several days to talk with the Swiss phage worker Jean Weigle, who was just back from a winter of work at Cal Tech. Before leaving, Jean had gone to the lecture where Linus had made the announcement.

BUKU SAINS POPULER PERTAMA YANG BERKISAH TENTANG PROSES PENEMUAN DNA, DENGAN GAYA BERTUTUR PERSONAL, TERMASUK DENGAN KISAH EMOSIONAL YANG DIALAMI WATSON

JAMES GLEICK, 1987

**BUKU SAINS YANG DITULIS
DENGAN GAYA SEPERTI
NOVEL. SUKSES MEMBAWA
FISIKA KE PANGGUNG DUNIA.**

**TEORI BUTTERFLY EFFECT
DALAM BUKU INI BANYAK
DIKUTIP SAMPAI KINI**



CHAOS – MAKING A NEW SCIENCE, JAMES GLEICK, 1987

THE SUN BEAT DOWN through a sky that had never seen clouds. The winds swept across an earth as smooth as glass. Night never came, and autumn never gave way to winter. It never rained. The simulated weather in Edward Lorenz's new electronic computer changed slowly but certainly, drifting through a permanent dry midday midseason, as if the world had turned into Camelot, or some particularly bland version of southern California.

Matahari menolak tenggelam di langit yang tanpa awan. Angin menyapu bumi dengan halus, seperti kaca. Malam tak pernah datang, dan musim gugur tak memberi jalan pada musim dingin.

BUKU SAINS YANG DITULIS DENGAN GAYA SEPerti NOVEL. SUKSES MEMBAWA FISIKA KE PANGGUNG DUNIA. TEORI BUTTERFLY EFFECT DALAM BUKU INI BANYAK DIKUTIP SAMPAI KINI

**NAH, SEKARANG
MARI MULAI MENULIS**



Pada Awalnya adalah

GAGASAN

**Apa langkah selanjutnya
setelah**

si



ketemu

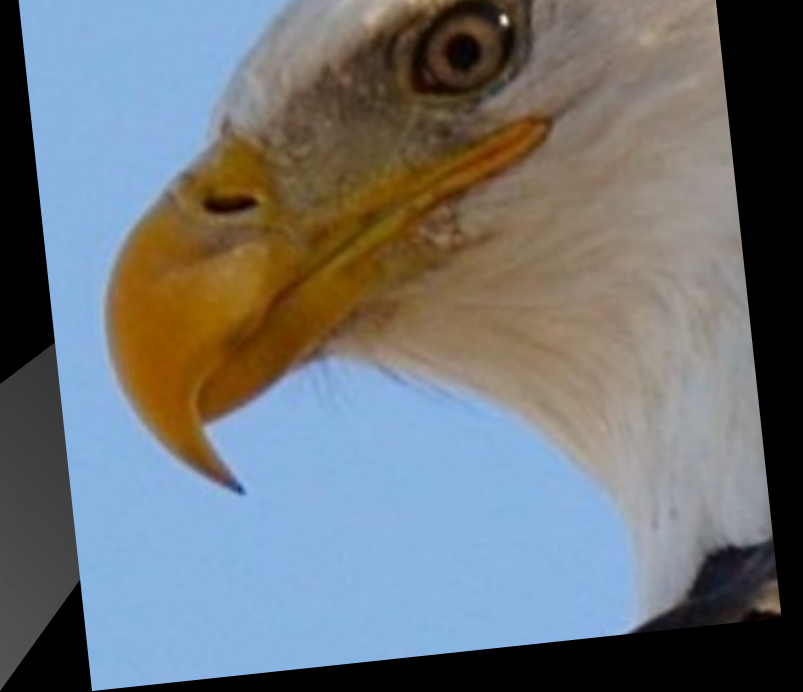
? ? ?

BEBERAPA JURUS

**SUPAYA ENAK DIBACA DAN
PERLU**

SATU TULISAN TAK MUNGKIN MENCAKUP SELURUH ASPEK
DARI SEBUAH PERSOALAN

TETAPKAN FOKUS & ANGLE



ANGLE

RUMUSKAN ANGLE KALIMAT TANYA GALI DENGAN 5W+1H

Misalnya:

Mengapa gerhana matahari total hanya terjadi di beberapa daerah di Indonesia?

Apa saja reaksi hewan-hewan pada detik-detik terjadinya gerhana matahari total di Palu?

Apa saja jenis kopi lokal yang menjadi bintang di berbagai kedai kopi terkenal di Indonesia?

Bagaimana dampak virus Zika pada proses tumbuh kembang janin di dalam kandungan ibu yang terkena virus Zika?

**AGAR TULISAN FOKUS,
1 TULISAN SETIA PADA 1 ANGLE**

GUNAKAN KISAH MANUSIA

Kasus Prita Mulyasari —- ibu dua anak, yang mengeluhkan layanan rumah sakit.

—> Lebih menyentuh pembaca dan masyarakat dibanding tulisan tentang problem kualitas layanan rumah sakit.

ANALOGI

Di tengah pro dan kontra penggunaan kemoterapi untuk kanker, apa pun pendapat dan alasan orang di luar sana, saya akan tetap merekomendasikannya.

Alasannya berhubungan dengan kelebihan obat ini yang tidak dimiliki obat-obat lain yang digunakan untuk tujuan yang sama, yaitu menghancurkan sel kanker. Obat kemoterapi, selain “bodoh”, juga sering saya sebut seperti Densus 88 (Detasemen Khusus Antiteror) Polri.

dr. Edi Tehuteru, “Melawan Kanker Bersama ‘Si Bodoh’”, Koran Tempo, 16 Februari 2016

REPORTASE / OBSERVASI

Laporan pertama datang dari Kota Palu, Sulawesi Tengah. Di sana terdapat kalong dan babi. Keduanya menunjukkan perubahan perilaku. Saat cahaya matahari masih nampak, kalong-kalong yang bertengger pada pohon masih tampak aktif dan mengeluarkan bunyi dengung. Demikian pula babi-babi ternak masyarakat, masih berkeliaran di kandangnya, beberapa tampak makan dengan lahap.

Namun, ketika gerhana matahari mencapai puncaknya dan kegelapan berlangsung selama sekitar 2 menit, kedua hewan ini langsung menghentikan kegiatannya. Babi-babi bahkan rebah di tanah dan bersiap tidur. Tapi begitu matahari muncul, mereka aktif kembali.

<https://tekno.tempo.co/read/news/2016/03/09/061752151/gelap-sesaat-ini-reaksi-hewan-sulawesi-saat-gerhana>

VISUALISASI

Semut-semut beriringan bagaikan rombongan pejalan kaki di kampung yang hangat. Saban kali bertemu kerabatnya, si semut bersentuhan kaki, seperti sedang beruluk salam.

Setelah menjalani terapi di salon kecantikan, alih-alih menjadi mulus, kulit perut Nona Ana justru tampak bergelombang seperti kain gorden.

Matahari-bulan-bumi bergerak perlahan, seolah mengikuti tali yang menggantung di angkasa maha luas. Perlahan, matahari, bulan, bumi, ambil posisi. Berderet dalam garis lurus. Alam raya sedang mengalibrasi dirinya.

KISS, KEEP IT SIMPLE & SHORT....

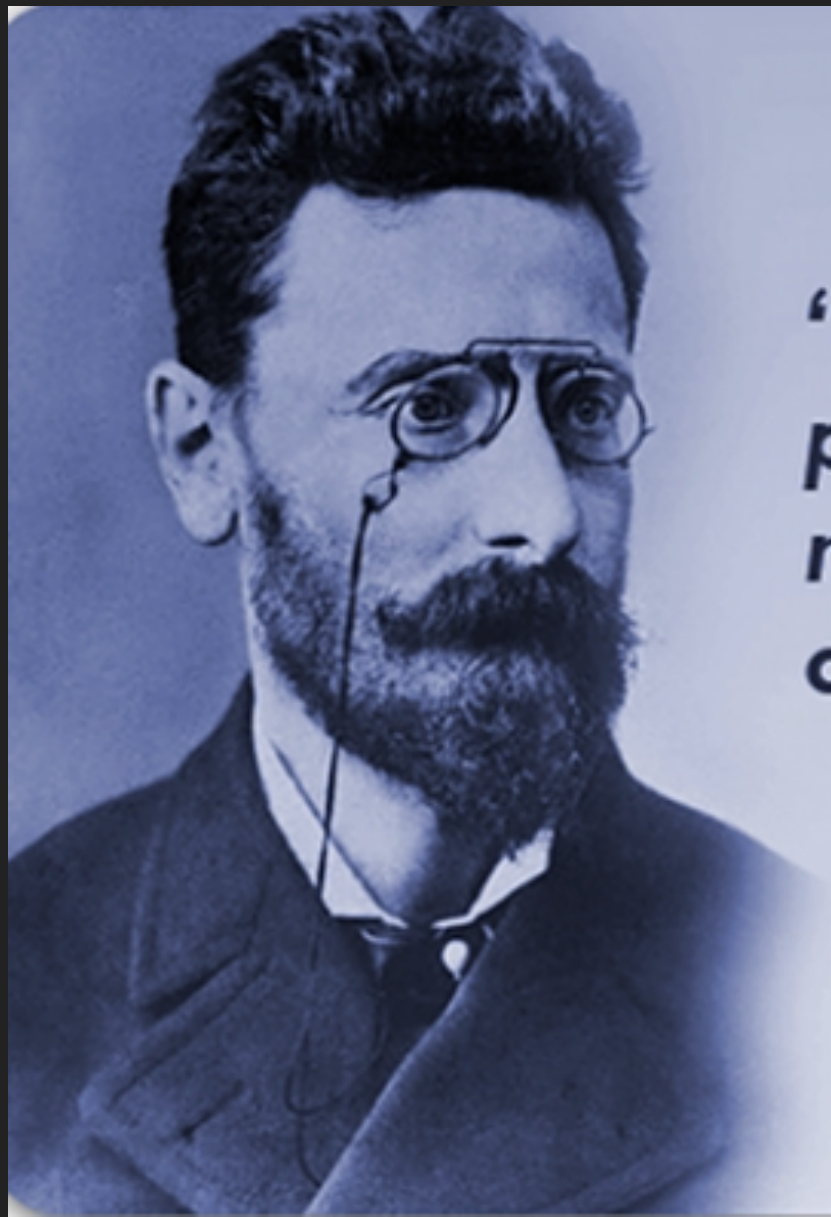
Tahukah Anda bahwa salah satu langkah penting yang bisa Anda lakukan sendiri untuk meningkatkan kualitas tulisan Anda adalah dengan belajar untuk memangkas kata-kata yang tidak perlu.

Salah satu langkah penting meningkatkan kualitas tulisan adalah belajar memangkas kata-kata yang tidak perlu.

Langkah penting meningkatkan kualitas tulisan adalah dengan memangkas kata-kata tidak perlu.

Tingkatkan kualitas tulisan dengan memangkas kata-kata tidak perlu.

27 kata menjadi 9 kata!



*“Publicity, publicity,
publicity is the greatest
moral factor and force in
our public life.”*

**JOSEPH
PULIZTER, 1847**

“ORANG BOLEH PANDAI SETINGGI LANGIT, TAPI SELAMA IA TIDAK MENULIS, IA AKAN HILANG DI DALAM MASYARAKAT DAN DARI SEJARAH. MENULIS ADALAH BEKERJA UNTUK KEABADIAN.”

Pramoedya Ananta Toer, Bumi Manusia

**TERIMA KASIH
SELAMAT MENULIS....**

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